CS1325 – Fall 2014

Assignment #3 –Functions, Arrays and Parallel Arrays

October 8th, 2014

Due Date: October 17th, 2014 – 10:00pm

Introduction

In this assignment you will write a small C program. Your program should compile correctly and produce the specified output.

Please note that the computer program should comply with the commenting and formatting rules as has been done in class. For example, there should be a header for the whole program that gives the author's name, class name, date, and description. End braces should be commented, and there are alignment and indenting requirements as discussed. Please ask if you have any questions.

Program #1

Given the following list of products:

UPC	**Description**	**PST**	**PPT**	**CIL**
4011	BANANAS	1	0.49	123.2
4383	MINNEOLAS	1	0.79	187.3
3144	TANGERINES	1	1.19	135.5
4028	STRAWBERRIES_PINT	0	0.99	104
4252	STRAWBERRIES_HALF_CASE	0	3.99	53
4249	STRAWBERRIES_FULL_CASE	0	7.49	67

Table 1: Product Information

Where

- UPC- Universal Product Code. Unique for each product
- Description: Product Name,
- PST: Product Sales Type: 0 = per unit, 1 = per pound
- PPT: Price Per Pound or Price Per Unit,
- CIL: Current Inventory Level.

Program should perform grocery check-out procedure for a simple store with max 6 products (Table 1).

1) Use parallel arrays to store the information on the table above (Table 1) (**5 points**).
2) Enter 1 to start a the checkout of a new customer, 0 to exit(close the store) (**5 points**).
3) The check-out functionality (**30 points**).
   a. Enable the user to purchase several products in each checkout.
   b. After the user enters UPC code, ask the user to input the weight or number of units for each product (depending on its sales type) and keep updating the inventory data along with checkout operations
   c. User can enter 0 for UPC code to indicate the end of checkout.

4) If the total purchase exceeds $50, apply 5% discount to the total (**5 points**).
5) If any input error, ask the user to enter it again (i.e. If the UPC is not found, ask the user to enter it again.) (**5 points**)
6) A coupon is assigned randomly. 1 out of every 10 customers get an additional 5% discount **(10 points)**

7) At the end of check out, print the receipt on the screen, with the following format (**30 points**):

```
UPC    Description          PPT        Weight/units          price
4011   BANANAS              0.49       2.0 lb                0.98
4028   STRAWBERRIES_PINT    0.99       3 u                   2.97
                                       SubTotal              3.95
                                       Discount              0.00
                                       Tax                   0.32
                                       Total                 4.27
```

8) When the store closes every day, inventory product information should be displayed (include all the parameters, similar to Table 1) (**10 points**).

Deliverables

You will turn in two files, a C source code file, and text file with an example of the program output.

The C source code file should:

1) Comply with all of the formatting requirements already discussed.
2) Query the user(input)
3) Display the output
4) Perform the operations described